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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/046,090	01/16/2002	Jung Shen Lien	MR1197-505	2466
4586	7590	12/08/2004	EXAMINER	
ROSENBERG, KLEIN & LEE 3458 ELLICOTT CENTER DRIVE-SUITE 101 ELLICOTT CITY, MD 21043			COLE, ELIZABETH M	
			ART UNIT	PAPER NUMBER
			1771	

DATE MAILED: 12/08/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/046,090

Applicant(s)

LIEN ET AL.

Examiner

Elizabeth M. Cole

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 22 September 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 18-33 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 18-33 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

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1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114.

Applicant's submission filed on 9/22/04 has been entered.

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 18-20, 23, 24-26, 29 rejected under 35 U.S.C. 102(b) as being anticipated by Cohen, U.S. Patent No. 5,316,837. Cohen discloses a method of forming a metal coating on a fabric. The fabric may comprise spun polymeric fibers, (col. 5, line 64 – col. 6, line 3) which is placed in a vacuum chamber which is maintained at  $10^{-4}$  Torr and extended to form a plane, (col. 6, lines 52 – 62), and then a flow of metal particles transverse to the planarly extended fabric are generated and plate a portion of the fabric, (col. 7, lines 1-35). Only one side of the fabric may be plated, (col. 36-44), which corresponds to the claimed first portion of the fabric which is plated with the metal particles while the unplated portion corresponds to the claimed second portion. The metal particles may be generated by sputtering, electron beam metal vapor deposition, (col. 7 lines 33-

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35), as well as metal vapor deposition, plasma treatment and other treatment which deposit metals, (col. 6, lines 15-21). Suitable metals include aluminum, copper, tin, zinc, lead, nickel, iron, gold and silver, (col. 5, lines 55-57) as well as alloys such as copper based alloys, aluminum based alloys, titanium based alloys and iron based alloys (col. 5, lines 56-59). The fabric to be plated may be pretreated by chemical or plasma or corona discharge treatments. See col. 6, lines 29-34.

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 27-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cohen, U.S. Patent No. 5,316,837 as applied to claims above, and further in view of Schilling et al, WO 98/10940 (equiv. To U.S. Patent No. 6,284,679). Cohen discloses a method of forming a metal coating on a fabric as set forth above. Cohen does not disclose multiple layers of metal particles being applied. Schilling teaches at col. 4, lines 15-55 that multiple layers and combinations of the metal particles may be applied. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have employed multiple layers and/or different metals to plate the fabric of Cohen. One of ordinary skill in the art would have been motivated to apply different

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metals and/or plural layers as taught by Schilling in order to impart particular properties to the metallized fabric.

6. Claims 21-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cohen as applied to claims above, and further in view of Feldman, U.S. Patent No. 5,974,784. Cohen discloses a method of plating a fabric as set forth above. Cohen differs from the claimed invention because it does not disclose pre-coating the fabric with a polymer and does not teach employing a fabric with multiple layers. Feldman discloses a three layer fabric which may be coated with thermoplastic resin and which may be plated by metallic particles while under vacuum. See col. 2, line 22 – col. 3, line 14. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have employed a multiple layer fabric as taught by Feldman because Feldman teaches that such fabrics are suitable for metallizing. It further would have been obvious to have employed a polymeric pre-coating as taught by Feldman, motivated by the teaching of Feldman that this would have enhanced the adhesion of the particles to the fabric.

7. Claim 33 is rejected under 35 U.S.C. 103(a) as being unpatentable over Cohen as applied to claims above, and further in view of Bieler et al, U.S. Patent No. 5,660,923. Cohen does not disclose employing metal containing powders with ceramic powders. Bieler teaches at col. 5, lines 4-14 that both metal powders, ceramic powders and alloy powders may be employed for applying a coating to fibers by vacuum plating. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention as made to have employed

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ceramic powders to coat the fabric of Cohen. One of ordinary skill in the art would have been motivated to employ such powders by the teaching of Bieler that such powders are art recognized equivalents for this purpose.

8. Applicant's arguments with respect to claims 18-33 have been considered but are moot in view of the new grounds of rejection.

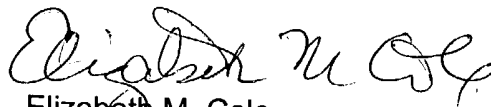
9. Applicant's amendment has overcome the 112 2<sup>nd</sup> paragraph rejection set forth in the previous action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Elizabeth M. Cole whose telephone number is (571) 272-1475. The examiner may be reached between 6:30 AM and 6:00 PM Monday through Wednesday, and 6:30 AM and 2 PM on Thursday.

Mr. Terrel Morris, the examiner's supervisor, may be reached at (571) 272-1478.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

The fax number for all official faxes is (703) 872-9306.



Elizabeth M. Cole  
Primary Examiner  
Art Unit 1771

e.m.c